DAFTAR PUSTAKA

Abuajah, C. I., Ogbonna, A. C., & Osuji, C. M. (2015). Functional components and medicinal properties of food: a review. *Journal of Food Science and Technology*, *52*(5), 2522–2529. https://doi.org/10.1007/s13197-014-1396-5

Adebo, O., Njobeh, P. B., Adebiyi, J., & Gbashi, S. (2017). Fermented Pulse-Based Food Products in Developing Nations as Functional Foods and Ingredients World ' s largest Science , Technology & Medicine Open Access book publisher, (August).

Aguilar-Toalá, J. E., Cruz-Monterrosa, R. G., & Liceaga, A. M. (2022). Beyond Human Nutrition of Edible Insects: Health Benefits and Safety Aspects. *Insects*, *13*(11), 1–17. https://doi.org/10.3390/insects13111007

Aji, A. P. (2023). Welnu dan Eet Ik Jou op: Bergelut dengan Serangan Belalang Kayu di Jawa (1878-1937). *Lembaran Sejarah*, *19*(1), 23. https://doi.org/10.22146/lembaran-sejarah.88237

Albarracín, W., Sánchez, I. C., Grau, R., & Barat, J. M. (2011). Salt in food processing; usage and reduction: A review. *International Journal of Food Science and Technology*, *46*(7), 1329–1336. https://doi.org/10.1111/j.1365-2621.2010.02492.x

An, B., Sam, C., Dries, V., Ruben, S., Christel, V., Mik, V. D. B., … Leen, V. C. (2019). Comparison of six commercial meat starter cultures for the fermentation of yellow mealworm (Tenebrio molitor) paste. *Microorganisms*, *7*(11). https://doi.org/10.3390/microorganisms7110540

Beldean, B. V., Chiș, M. S., Alexa, E., Pop, C., Păucean, A., Man, S., … Muste, S. (2022). The Impact of Insect Flour on Sourdough Fermentation-Fatty Acids, Amino-Acids, Minerals and Volatile Profile. *Insects*, *13*(7). https://doi.org/10.3390/insects13070576

Blasi, F., Chiesi, C., Spogli, R., Cossignani, L., & Nocchetti, M. (2021). Oxidative stability of long-chain fatty acids with different unsaturation degrees into layered double hydroxides. *Applied Sciences (Switzerland)*, *11*(15). https://doi.org/10.3390/app11157035

Chaudhary, P., Janmeda, P., Docea, A. O., Yeskaliyeva, B., Abdull Razis, A. F., Modu, B., … Sharifi-Rad, J. (2023). Oxidative stress, free radicals and antioxidants: potential crosstalk in the pathophysiology of human diseases. *Frontiers in Chemistry*, *11*(May), 1–24. https://doi.org/10.3389/fchem.2023.1158198

Che, H., Yu, J., Sun, J., Lu, K., & Xie, W. (2021). Bacterial composition changes and volatile compounds during the fermentation of shrimp paste: Dynamic

changes of microbial communities and flavor composition. *Food Bioscience*, *43*(May). https://doi.org/10.1016/j.fbio.2021.101169

Chen, Y., Feng, X., Ren, H., Yang, H., Liu, Y., Gao, Z., & Long, F. (2020). Changes in physicochemical properties and volatiles of kiwifruit pulp beverage treated with high hydrostatic pressure. *Foods*, *9*(4). https://doi.org/10.3390/foods9040485

Chew, L. Y., Toh, G. T., & Ismail, A. (2018). Application of proteases for the production of bioactive peptides. *Enzymes in Food Biotechnology: Production, Applications, and Future Prospects*, 247–261. https://doi.org/10.1016/B978-0-12-813280-7.00015-3

Cho, J. H., Zhao, H. L., Kim, J. S., Kim, S. H., & Chung, C. H. (2018). Characteristics of fermented seasoning sauces using Tenebrio molitor larvae. *Innovative Food Science and Emerging Technologies*, *45*(May 2017), 186–195. https://doi.org/10.1016/j.ifset.2017.10.010

Chourasia, R., Chiring Phukon, L., Abedin, M. M., Padhi, S., Singh, S. P., & Rai, A. K. (2023). Bioactive peptides in fermented foods and their application: a critical review. *Systems Microbiology and Biomanufacturing*, *3*(1), 88–109. https://doi.org/10.1007/s43393-022-00125-4

Curtis, R. A., & Lue, L. (2006). A molecular approach to bioseparations: Protein-protein and protein-salt interactions. *Chemical Engineering Science*, *61*(3), 907–923. https://doi.org/10.1016/j.ces.2005.04.007

da Cruz, L. N., Rocha, L. de O., & de Castro, R. J. S. (2023). Submerged fermentation using Aspergillus tubingensis as an efficient strategy to obtain antioxidant extracts from black cricket proteins. *Food and Humanity*, *1*(August), 1018–1026. https://doi.org/10.1016/j.foohum.2023.08.012

Dhakal, M., Kemsawasd, V., Whanmek, K., Chathiran, W., Intawong, S., Srichamnong, W., … Kittibunchakul, S. (2025). Physicochemical characteristics, volatile components and bioactivities of fermented seasoning sauce produced from cricket (Acheta domesticus) meal. *Future Foods*, *11*(December 2024), 100505. https://doi.org/10.1016/j.fufo.2024.100505

Diepeveen, J., Moerdijk-Poortvliet, T. C. W., & van der Leij, F. R. (2022). Molecular insights into human taste perception and umami tastants: A review. *Journal of Food Science*, *87*(4), 1449–1465. https://doi.org/10.1111/1750-3841.16101

Diez-Simon, C., Mumm, R., & Hall, R. D. (2019). Mass spectrometry-based metabolomics of volatiles as a new tool for understanding aroma and flavour chemistry in processed food products. *Metabolomics*, *15*(3). https://doi.org/10.1007/s11306-019-1493-6

Dimidi, E., Cox, S. R., Rossi, M., & Whelan, K. (2019). Fermented foods: Definitions and characteristics, impact on the gut microbiota and effects on

gastrointestinal health and disease. *Nutrients*, *11*(8). https://doi.org/10.3390/nu11081806

Dobermann, D., Swift, J. A., & Field, L. M. (2017). Opportunities and hurdles of edible insects for food and feed. *Nutrition Bulletin*, *42*(4), 293–308. https://doi.org/10.1111/nbu.12291

Elias, R. J., Kellerby, S. S., & Decker, E. A. (2008). Antioxidant activity of proteins and peptides. *Critical Reviews in Food Science and Nutrition*, *48*(5), 430–441. https://doi.org/10.1080/10408390701425615

Erastus Mosha, & Ruíz, A. A. B. (2010). No 主観的健康感を中心とした在宅高齢者における 健康関連指標に関する共分散構造分析Title. *Theoretical and Applied Genetics*, *7*(2), 1–7. Retrieved from http://repositorio.unan.edu.ni/2986/1/5624.pdf%0Ahttp://dx.doi.org/10.1016/j.tplants.2011.03.004%0Ahttp://dx.doi.org/10.1016/j.pbi.2010.01.004%0Ahttp://www.biomedcentral.com/1471-2156/12/42%0Ahttp://dx.doi.org/10.1016/j.biotechadv.2009.11.005%0Ahttp://www

European Commission approves fourth insect as " Novel Food ". (2023), (January 2018), 3079396.

Fan, Y., Yin, L., Xue, Y., Li, Z., Hou, H., & Xue, C. (2017). Analyzing the flavor compounds in Chinese traditional fermented shrimp pastes by HS-SPME-GC/MS and electronic nose. *Journal of Ocean University of China*, *16*(2), 311–318. https://doi.org/10.1007/s11802-017-3194-y

Feng, L., Tang, N., Liu, R., Gong, M., Wang, Z., Guo, Y., … Chang, M. (2021). The relationship between flavor formation, lipid metabolism, and microorganisms in fermented fish products. *Food and Function*, *12*(13), 5685–5702. https://doi.org/10.1039/d1fo00692d

Focus, I. N. (1997). : zg, *29*(Ii), 1235–1239.

Gautam, A. (2020). Encyclopedia of Animal Cognition and Behavior. *Encyclopedia of Animal Cognition and Behavior*, (April). https://doi.org/10.1007/978-3-319-47829-6

Gou, F., Gao, S., & Li, B. (2024). Lipid-Induced Oxidative Modifications Decrease the Bioactivities of Collagen Hydrolysates from Fish Skin: The Underlying Mechanism Based on the Proteomic Strategy. *Foods*, *13*(4). https://doi.org/10.3390/foods13040583

Gul, K., Singh, P., & Wani, A. A. (2016). Safety of Meat and Poultry. *Regulating Safety of Traditional and Ethnic Foods*, 63–77. https://doi.org/10.1016/B978-0-12-800605-4.00004-9

Guo, H., Ji, M., Du, T., Xu, W., Liu, J., Bai, R., … Li, T. (2023). Salt stress altered anaerobic microbial community and carbon metabolism characteristics: The

trade-off between methanogenesis and chain elongation. *Journal of Environmental Management*, *341*(May). https://doi.org/10.1016/j.jenvman.2023.118111

Häner, A., Mason, C. A., & Hamer, G. (1994). Death and lysis during aerobic thermophilic sludge treatment: Characterization of recalcitrant products. *Water Research*, *28*(4), 863–869. https://doi.org/10.1016/0043-1354(94)90092-2

Hartmann, C., & Siegrist, M. (2016). Becoming an insectivore: Results of an experiment. *Food Quality and Preference*, *51*, 118–122. https://doi.org/10.1016/j.foodqual.2016.03.003

He, G., Deng, J., Wu, C., & Huang, J. (2017). A partial proteome reference map of Tetragenococcus halophilus and comparative proteomic and physiological analysis under salt stress. *RSC Advances*, *7*(21), 12753–12763. https://doi.org/10.1039/c6ra22521g

Helmi, H., Astuti, D. I., Putri, S. P., Sato, A., Laviña, W. A., Fukusaki, E., & Aditiawati, P. (2022). Dynamic Changes in the Bacterial Community and Metabolic Profile during Fermentation of Low-Salt Shrimp Paste (Terasi). *Metabolites*, *12*(2). https://doi.org/10.3390/metabo12020118

Hopkins, T. L., Starkey, S. R., Xu, R., Merritt, M. E., Schaefer, J., & Kramer, K. J. (1999). Catechols involved in sclerotization of cuticle and egg pods of the grasshopper, Melanoplus sanguinipes, and their interactions with cuticular proteins. *Archives of Insect Biochemistry and Physiology*, *40*(3), 119–128. https://doi.org/10.1002/(SICI)1520-6327(1999)40:3<119::AID-ARCH1>3.0.CO;2-H

Hu, M., Zhao, L., Sun, H., Liu, Q., Xue, Y., & Cao, R. (2025). Decoding volatile-microbial-physicochemical interplay of sensory preference in commercial shrimp paste based on flavoromics and high-throughput sequencing. *Current Research in Food Science*, *10*(April). https://doi.org/10.1016/j.crfs.2025.101050

Ibrahim, S. A., Ayivi, R. D., Zimmerman, T., Siddiqui, S. A., Altemimi, A. B., Fidan, H., … Bakhshayesh, R. V. (2021). Lactic acid bacteria as antimicrobial agents: Food safety and microbial food spoilage prevention. *Foods*, *10*(12), 1–13. https://doi.org/10.3390/foods10123131

Isaac Ayanniran Adesokan. (2023). Production of functional fruit juice from water melon (Citrullus lanatus) by fermentation of lactic acid bacteria. *World Journal of Advanced Science and Technology*, *3*(2), 021–026. https://doi.org/10.53346/wjast.2023.3.2.0064

Ito, K., Koyama, Y., & Hanya, Y. (2013). Identification of the glutaminase genes of Aspergillus sojae involved in glutamate production during soy sauce fermentation. *Bioscience, Biotechnology and Biochemistry*, *77*(9), 1832–1840. https://doi.org/10.1271/bbb.130151

Jang, H., & Kim, M. (2021). Antidiabetic, anticholesterol, and antioxidant activity of Gryllus bimaculatus fermented by Bacillus and Lactobacillus strains. *Applied Sciences (Switzerland)*, *11*(5), 1–13. https://doi.org/10.3390/app11052090

Jarvis, N. A., O'Bryan, C. A., Dawoud, T. M., Park, S. H., Kwon, Y. M., Crandall, P. G., & Ricke, S. C. (2016). An overview of Salmonella thermal destruction during food processing and preparation. *Food Control*, *68*, 280–290. https://doi.org/10.1016/j.foodcont.2016.04.006

Jeanette, G., Padjadjaran, U., Subroto, E., Indiarto, R., Mulkya Zdikri, H., & Azkia Yusra, N. (2021). A Mini-Review Of Salting Techniques To Improve Food Quality Hilman Mulkya A Mini-Review Of Salting Techniques To Improve Food Quality. *Article in International Journal of Scientific & Technology Research*, *10*(January), 1. Retrieved from www.ijstr.org

Jemil, I., Jridi, M., Nasri, R., Ktari, N., Ben Slama-Ben Salem, R., Mehiri, M., … Nasri, M. (2014). Functional, antioxidant and antibacterial properties of protein hydrolysates prepared from fish meat fermented by Bacillus subtilis A26. *Process Biochemistry*, *49*(6), 963–972. https://doi.org/10.1016/j.procbio.2014.03.004

Jemil, I., Mora, L., Nasri, R., Abdelhedi, O., Aristoy, M. C., Hajji, M., … Toldrá, F. (2016). A peptidomic approach for the identification of antioxidant and ACE-inhibitory peptides in sardinelle protein hydrolysates fermented by Bacillus subtilis A26 and Bacillus amyloliquefaciens An6. *Food Research International*, *89*, 347–358. https://doi.org/10.1016/j.foodres.2016.08.020

Joseph, F. Z. (1997). Chapter 2 Water Holding Capacity of Proteins. *Functionality of Proteins in Food*, 76–133.

Kakar, A., Fatima Miano, T., Hussain Soomro, A., Yar, A., Ara Memon, S., & Khan, B. (2022). Oil and Water Absorption Capacity of Wheat, Rice and Gram Flour Powders. *International Journal of Ecosystems and Ecology Science (IJEES)*, *12*(2), 585–594. https://doi.org/10.31407/ijees12.232

Kanzler, C., Haase, P. T., Schestkowa, H., & Kroh, L. W. (2016). Antioxidant Properties of Heterocyclic Intermediates of the Maillard Reaction and Structurally Related Compounds. *Journal of Agricultural and Food Chemistry*, *64*(41), 7829–7837. https://doi.org/10.1021/acs.jafc.6b03398

Kedare, S. B., & Singh, R. P. (2011). Genesis and development of DPPH method of antioxidant assay. *Journal of Food Science and Technology*, *48*(4), 412–422. https://doi.org/10.1007/s13197-011-0251-1

Kewuyemi, Y. O., Kesa, H., Chinma, C. E., & Adebo, O. A. (2020). Fermented edible insects for promoting food security in Africa. *Insects*, *11*(5), 1–16. https://doi.org/10.3390/insects11050283

Kieliszek, M., Pobiega, K., Piwowarek, K., & Kot, A. M. (2021). Characteristics of

the proteolytic enzymes produced by lactic acid bacteria. *Molecules*, *26*(7). https://doi.org/10.3390/molecules26071858

Kim, T. K., Yong, H. I., Jung, S., Kim, H. W., & Choi, Y. S. (2021). Effect of reducing sodium chloride based on the sensory properties of meat products and the improvement strategies employed: A review. *Journal of Animal Science and Technology*, *63*(4), 725–739. https://doi.org/10.5187/jast.2021.e74

Kim, Y., Cho, S., & Kim, Y. (2024). Quality properties of salt-fermented mealworms (Tenebrio molitor larvae) with added millet. *International Journal of Gastronomy and Food Science*, *37*(August). https://doi.org/10.1016/j.ijgfs.2024.101007

Kitryte, V., Adams, A., Venskutonis, P. R., & De Kimpe, N. (2012). Impact of lipid oxidation-derived aldehydes and ascorbic acid on the antioxidant activity of model melanoidins. *Food Chemistry*, *135*(3), 1273–1283. https://doi.org/10.1016/j.foodchem.2012.05.077

Kittibunchakul, S., Whanmek, K., & Santivarangkna, C. (2023). Physicochemical, microbiological and nutritional quality of fermented cricket (Acheta domesticus) paste. *Lwt*, *189*(August), 115444. https://doi.org/10.1016/j.lwt.2023.115444

Kleekayai, T., Harnedy, P. A., O'Keeffe, M. B., Poyarkov, A. A., Cunhaneves, A., Suntornsuk, W., & Fitzgerald, R. J. (2015). Extraction of antioxidant and ACE inhibitory peptides from Thai traditional fermented shrimp pastes. *Food Chemistry*, *176*, 441–447. https://doi.org/10.1016/j.foodchem.2014.12.026

Kleekayai, T., Pinitklang, S., Laohakunjit, N., & Suntornsuk, W. (2016). Volatile components and sensory characteristics of Thai traditional fermented shrimp pastes during fermentation periods. *Journal of Food Science and Technology*, *53*(3), 1399–1410. https://doi.org/10.1007/s13197-015-2142-3

Kleekayai, T., Saetae, D., Wattanachaiyingyong, O., Tachibana, S., Yasuda, M., & Suntornsuk, W. (2015). Characterization and in vitro biological activities of Thai traditional fermented shrimp pastes. *Journal of Food Science and Technology*, *52*(3), 1839–1848. https://doi.org/10.1007/s13197-014-1528-y

Korkmaz, K., & Tokur, B. (2022). Optimization of hydrolysis conditions for the production of protein hydrolysates from fish wastes using response surface methodology. *Food Bioscience*, *45*(March 2021). https://doi.org/10.1016/j.fbio.2021.101312

Kröger, T., Dupont, J., Büsing, L., & Fiebelkorn, F. (2022). Acceptance of Insect-Based Food Products in Western Societies: A Systematic Review. *Frontiers in Nutrition*, *8*(June 2021), 1–26. https://doi.org/10.3389/fnut.2021.759885

Leistner, L. (1991). Fermented and Intermediate-Moisture Meat Products. *Outlook on Agriculture*, *20*(2), 113–119.

https://doi.org/10.1177/003072709102000210

Li, Q., Tao, Q. Y., Teixeira, J. S., Shu-Wei Su, M., & Gänzle, M. G. (2020). Contribution of glutaminases to glutamine metabolism and acid resistance in Lactobacillus reuteri and other vertebrate host adapted lactobacilli. *Food Microbiology*, *86*(September 2019), 4–10. https://doi.org/10.1016/j.fm.2019.103343

Li, X., Luan, A., Li, X., Wang, F., Huang, Y., Li, A., & Liu, Y. (2022). Protein degradation and aggregation in silver carp (Hypophthalmichthys molitrix) muscle during hot air drying. *Lwt*, *163*(March). https://doi.org/10.1016/j.lwt.2022.113540

Li, Y., Leng, W., Xue, J., Yuan, L., Liu, H., & Gao, R. (2023). A multi-omics-based investigation into the flavor formation mechanisms during the fermentation of traditional Chinese shrimp paste. *Food Research International*, *166*(February). https://doi.org/10.1016/j.foodres.2023.112585

Liceaga, A. M. (2021). Processing insects for use in the food and feed industry. *Current Opinion in Insect Science*, *48*, 32–36. https://doi.org/10.1016/j.cois.2021.08.002

Lin, X., Tang, Y., Hu, Y., Lu, Y., Sun, Q., Lv, Y., … Chi, Y. (2021). Sodium Reduction in Traditional Fermented Foods: Challenges, Strategies, and Perspectives. *Journal of Agricultural and Food Chemistry*, *69*(29), 8065–8080. https://doi.org/10.1021/acs.jafc.1c01687

Liu, L., Deng, X., Huang, L., Li, Y., Zhang, Y., Chen, X., … Rao, Y. (2022). Comparative effects of high hydrostatic pressure, pasteurization and nisin processing treatments on the quality of pickled radish. *Lwt*, *167*(March), 1–11. https://doi.org/10.1016/j.lwt.2022.113833

Liu, R., Ma, Y., Chen, L., Lu, C., Ge, Q., Wu, M., … Yu, H. (2023). Effects of the addition of leucine on flavor and quality of sausage fermented by Lactobacillus fermentum YZU-06 and Staphylococcus saprophyticus CGMCC 3475. *Frontiers in Microbiology*, *13*(February), 1–11. https://doi.org/10.3389/fmicb.2022.1118907

Liu, Y., Chi, Y., & Chi, Y. (2023). Water filling of rapidly salted separated egg yolks: Characterization of water migration, aggregation behavior and protein structure. *Food Chemistry Advances*, *2*(600). https://doi.org/10.1016/j.focha.2023.100274

Lorenzo, J. M., Munekata, P. E. S., Gómez, B., Barba, F. J., Mora, L., Pérez-Santaescolástica, C., & Toldrá, F. (2018). Bioactive peptides as natural antioxidants in food products – A review. *Trends in Food Science and Technology*, *79*(March), 136–147. https://doi.org/10.1016/j.tifs.2018.07.003

Lutovska, M., Mitrevski, V., Geramitcioski, T., Mijakovski, V., & Andreevski, I. (2016). Water Activity Vs. Equilibrium Moisture Content Vodena Aktivnost

Nasuprot Ravnotežne Vlažnosti Materijala. *Journal on Processing and Energy in Agriculture*, *20*(April), 69–72.

Mancinelli, R., Botti, A., Bruni, F., Ricci, M. A., & Soper, A. K. (2007). Hydration of sodium, potassium, and chloride ions in solution and the concept of structure maker/breaker. *Journal of Physical Chemistry B*, *111*(48), 13570–13577. https://doi.org/10.1021/jp075913v

Maoz, I., Lewinsohn, E., & Gonda, I. (2022). Amino acids metabolism as a source for aroma volatiles biosynthesis. *Current Opinion in Plant Biology*, *67*. https://doi.org/10.1016/j.pbi.2022.102221

Marín-Morales, M. S., Ibarra-Herrera, C. C., Luna-Vital, D. A., Monribot-Villanueva, J. L., & Guerrero-Analco, J. A. (2022). Biological activity of extracts and hydrolysates from early- and adult-stage edible grasshopper Sphenarium purpurascens. *Frontiers in Nutrition*, *9*(November), 1–15. https://doi.org/10.3389/fnut.2022.1028543

Matiza Ruzengwe, F., Nyarugwe, S. P., Manditsera, F. A., Mubaiwa, J., Cottin, S., Matsungo, T. M., … Macheka, L. (2022). Contribution of edible insects to improved food and nutrition security: A review. *International Journal of Food Science and Technology*, *57*(10), 6257–6269. https://doi.org/10.1111/ijfs.15570

Maturin, L., & Peeler, J. T. (2001). Bacteriological Analytical Manual: Chapter 3 Aerobic Plate Count. *United States Food and Drug Administration*, (January 2001), 10.

Mazorra-Manzano, M. A., Ramírez-Suarez, J. C., & Yada, R. Y. (2018). Plant proteases for bioactive peptides release: A review. *Critical Reviews in Food Science and Nutrition*, *58*(13), 2147–2163. https://doi.org/10.1080/10408398.2017.1308312

Mejri, L., Vásquez-Villanueva, R., Hassouna, M., Marina, M. L., & García, M. C. (2017). Identification of peptides with antioxidant and antihypertensive capacities by RP-HPLC-Q-TOF-MS in dry fermented camel sausages inoculated with different starter cultures and ripening times. *Food Research International*, *100*(July), 708–716. https://doi.org/10.1016/j.foodres.2017.07.072

Melo-Ruiz, V., Sandoval-Trujillo, H., Quirino-Barreda, T., Sánchez-Herrera, K., Díaz-García, R., & Calvo-Carrillo, C. (2015). Chemical composition and amino acids content of five species of edible Grasshoppers from Mexico. *Emirates Journal of Food and Agriculture*, *27*(8), 654–658. https://doi.org/10.9755/ejfa.2015.04.093

Melo, V., Garcia, M., Sandoval, H., Jiménez, H. D., & Calvo, C. (2011). Quality proteins from edible indigenous insect food of latin America and Asia. *Emirates Journal of Food and Agriculture*, *23*(3), 283–289.

Mendoza-Salazar, A., Santiago-López, L., Torres-Llanez, M. J., Hernández-Mendoza, A., Vallejo-Cordoba, B., Liceaga, A. M., & González-Córdova, A. F. (2021). In vitro antioxidant and antihypertensive activity of edible insects flours (Mealworm and grasshopper) fermented with lactococcus lactis strains. *Fermentation*, *7*(3). https://doi.org/10.3390/FERMENTATION7030153

Mi, T., Wang, D., Yao, S., Yang, H., Che, Y., & Wu, C. (2022). Effects of salt concentration on the quality and microbial diversity of spontaneously fermented radish paocai. *Food Research International*, *160*(June), 111622. https://doi.org/10.1016/j.foodres.2022.111622

Morales, F. J., Fernández-Fraguas, C., & Jiménez-Pérez, S. (2005). Iron-binding ability of melanoidins from food and model systems. *Food Chemistry*, *90*(4), 821–827. https://doi.org/10.1016/j.foodchem.2004.05.030

Mouritsen, O. G., Duelund, L., Calleja, G., & Frøst, M. B. (2017). Flavour of fermented fish, insect, game, and pea sauces: Garum revisited. *International Journal of Gastronomy and Food Science*, *9*(May), 16–28. https://doi.org/10.1016/j.ijgfs.2017.05.002

Nissen, L., Samaei, S. P., Babini, E., & Gianotti, A. (2020). Gluten free sourdough bread enriched with cricket flour for protein fortification: Antioxidant improvement and Volatilome characterization. *Food Chemistry*, *333*(December 2019), 127410. https://doi.org/10.1016/j.foodchem.2020.127410

Nooshkam, M., Varidi, M., & Bashash, M. (2019). The Maillard reaction products as food-born antioxidant and antibrowning agents in model and real food systems. *Food Chemistry*, *275*(September 2018), 644–660. https://doi.org/10.1016/j.foodchem.2018.09.083

Nunes, A., Sampaio, E., Fernanda, E., Caron, F., Koutsodontis, C., Cézar, C., … Martins, O. A. (2024). Understanding lipid oxidation in dried meat and cured dried meat : Insights from peroxide index analysis, *2061*, 1–7.

Nurhasnita, F., Yaherwandi, F., & Efendi, S. (2020). Survei Hama Pada Perkebunan Kelapa Sawit Rakyat di Kecamatan Sembilan Koto Kabupaten Dharmasraya. *Agriprima : Journal of Applied Agricultural Sciences*, *4*(1), 6–17. https://doi.org/10.25047/agriprima.v4i1.347

Ochieng, B. O., Anyango, J. O., Nduko, J. M., Cheseto, X., Mudalungu, C. M., Khamis, F. M., … Tanga, C. M. (2022). Dynamics in nutrients, sterols and total flavonoid content during processing of the edible Long-Horned grasshopper (Ruspolia differens Serville) for food. *Food Chemistry*, *383*(January). https://doi.org/10.1016/j.foodchem.2022.132397

Of, O., & Hill, F. S. (2014). *PENINSULAR MALAYSIA Ming Kai Tan and Khairul Nizam Kamaruddin*.

Ohata, M., Uchida, S., Zhou, L., & Arihara, K. (2016). Antioxidant activity of

fermented meat sauce and isolation of an associated antioxidant peptide. *Food Chemistry*, *194*, 1034–1039. https://doi.org/10.1016/j.foodchem.2015.08.089

Ojha, S., Bußler, S., Psarianos, M., Rossi, G., & Schlüter, O. K. (2021). Abstract, *7*(5), 877–900.

Onwezen, M. C., Bouwman, E. P., Reinders, M. J., & Dagevos, H. (2021). A systematic review on consumer acceptance of alternative proteins: Pulses, algae, insects, plant-based meat alternatives, and cultured meat. *Appetite*, *159*(December 2020). https://doi.org/10.1016/j.appet.2020.105058

Orkusz, A. (2021). Edible insects versus meat—nutritional comparison: Knowledge of their composition is the key to good health. *Nutrients*, *13*(4). https://doi.org/10.3390/nu13041207

Palupi, E., Anwar, F., Tanziha, I., Gunawan, M. A., Khomsan, A., Kurniawati, F., & Muslich, M. (2020). Protein sources diversity from gunungkidul district, Yogyakarta province, Indonesia. *Biodiversitas*, *21*(2), 799–813. https://doi.org/10.13057/biodiv/d210248

Patarata, L., & Fernandes, L. (2022). The Risk of Salt Reduction in Dry-Cured Sausage Assessed by, 1–15.

Pathare, P. B., Opara, U. L., & Al-Said, F. A. J. (2013). Colour Measurement and Analysis in Fresh and Processed Foods: A Review. *Food and Bioprocess Technology*, *6*(1), 36–60. https://doi.org/10.1007/s11947-012-0867-9

Paulin, I. G., & Purwanto, M. G. (2020). Nutritional Characteristics of Teak Grasshopper (Valanga nigricornis Burmeister), Cricket (Brachytrupes portentosus L.), and Mealworm (Tenebrio molitor) as Alternative Food Sources in Indonesia. *Indonesian Journal of Biotechnology and Biodiversity*, *4*(1), 52–61. https://doi.org/10.47007/ijobb.v4i1.62

Peralta, E. M., Hatate, H., Kawabe, D., Kuwahara, R., Wakamatsu, S., Yuki, T., & Murata, H. (2008). Improving antioxidant activity and nutritional components of Philippine salt-fermented shrimp paste through prolonged fermentation. *Food Chemistry*, *111*(1), 72–77. https://doi.org/10.1016/j.foodchem.2008.03.042

Petrin, S., Mancin, M., Losasso, C., Deotto, S., Olsen, J. E., & Barco, L. (2022). Effect of pH and Salinity on the Ability of Salmonella Serotypes to Form Biofilm. *Frontiers in Microbiology*, *13*(April). https://doi.org/10.3389/fmicb.2022.821679

Phewpan, A., Phuwaprisirisan, P., Takahashi, H., Ohshima, C., Lopetcharat, K., Techaruvichit, P., & Keeratipibul, S. (2020). Microbial diversity during processing of Thai traditional fermented shrimp paste, determined by next generation sequencing. *Lwt*, *122*(September 2019). https://doi.org/10.1016/j.lwt.2019.108989

Poernomo, D., Wijatur, W., & Perikanan, F. (2009). (Rastrelliger sp .) DENGAN

FERMENTASI SPONTAN The influence of salt concentration on peda chub mackerel (Rastrelliger sp .) with spontaneous fermentation Perkembangan industri perikanan di Indonesia mengalami peningkatan dalam memenuhi kebutuhan masyara, *XII*, 73–87.

Pongsetkul, J., Benjakul, S., Vongkamjan, K., Sumpavapol, P., & Osako, K. (2017). Microbiological and chemical changes of shrimp Acetes vulgaris during Kapi production. *Journal of Food Science and Technology*, *54*(11), 3473–3482. https://doi.org/10.1007/s13197-017-2804-4

Poulsen, N. A., Eskildsen, C. E., Akkerman, M., Johansen, L. B., Hansen, M. S., Hansen, P. W., … Larsen, L. B. (2016). Predicting hydrolysis of whey protein by mid-infrared spectroscopy. *International Dairy Journal*, *61*, 44–50. https://doi.org/10.1016/j.idairyj.2016.04.002

Prapasuwannakul, N., & Suwannahong, K. (2015). Chemical Composition and Antioxidant Activity of Klongkone Shrimp Paste. *Procedia - Social and Behavioral Sciences*, *197*(February), 1095–1100. https://doi.org/10.1016/j.sbspro.2015.07.351

Prihanto, A. A., & Muyasyaroh, H. (2021). The Indonesian Fermented Food Product Terasi: History and Potential Bioactivities. *Systematic Reviews in Pharmacy*, *12*(2), 378–384. https://doi.org/10.31838/srp.2021.2.52

Puspita, D. A., & Agustini, T. W. (2019). The Effect of Different Concentration of Salt to the Glutamic Acid in Catfish Bakasam Powder. *Jurnal Teknologi Pangan*, *3*(1), 110–115. https://doi.org/10.14710/jtp.2019.23152

Qi, Z., Sun, Z., Li, N., Chen, Q., Liu, W., & Li, W. (2022). Effect of inorganic salt concentration and types on electrophoretic migration of oil droplets in oil-in-water emulsion: A molecular dynamics study. *Journal of Molecular Liquids*, *367*. https://doi.org/10.1016/j.molliq.2022.120549

Rao, D. N. (1997). Intermediate moisture foods based on meats - A review. *Food Reviews International*, *13*(4), 519–551. https://doi.org/10.1080/87559129709541139

Rhee, S. J., Lee, J. E., & Lee, C. H. (2011). Importance of lactic acid bacteria in Asian fermented foods. *Microbial Cell Factories*, *10*(SUPPL. 1), 1–13. https://doi.org/10.1186/1475-2859-10-S1-S5

Roppongi, T., Mizuno, N., Miyagawa, Y., Kobayashi, T., Nakagawa, K., & Adachi, S. (2021). Solubility and mass transfer coefficient of oxygen through gas– and water–lipid interfaces. *Journal of Food Science*, *86*(3), 867–873. https://doi.org/10.1111/1750-3841.15641

Rutherfurd, S. M. (2010). Methodology for determining degree of hydrolysis of proteins in hydrolysates: A Review. *Journal of AOAC International*, *93*(5), 1515–1522. https://doi.org/10.1093/jaoac/93.5.1515

Sachindra, N. M., & Bhaskar, N. (2008). In vitro antioxidant activity of liquor from

fermented shrimp biowaste. *Bioresource Technology*, *99*(18), 9013–9016. https://doi.org/10.1016/j.biortech.2008.04.036

Seong, H. Y., & Kim, M. (2021). Enhanced protein quality and antioxidant activity of fermented Brown rice with Gryllus bimaculatus. *Lwt*, *150*(January). https://doi.org/10.1016/j.lwt.2021.111948

Sohail, A., Al-Dalali, S., Wang, J., Xie, J., Shakoor, A., Asimi, S., … Patil, P. (2022). Aroma compounds identified in cooked meat: A review. *Food Research International*, *157*(February). https://doi.org/10.1016/j.foodres.2022.111385

Song, X., Liao, D., Zhou, Y., Huang, Q., Lei, S., & Li, X. (2024). Correlation between physicochemical properties, flavor characteristics and microbial community structure in Dushan shrimp sour paste. *Food Chemistry: X*, *23*(April). https://doi.org/10.1016/j.fochx.2024.101543

Stone, A. K., Tanaka, T., & Nickerson, M. T. (2019). Protein quality and physicochemical properties of commercial cricket and mealworm powders. *Journal of Food Science and Technology*, *56*(7), 3355–3363. https://doi.org/10.1007/s13197-019-03818-2

Studi Pembuatan Kecap Ikan Selar (Caranx leptolepis) dengan Fermentasi Spontan.pdf. (n.d.).

Sumardianto, S., Wijayanti, I., & Swastawati, F. (2019). Characteristics of Physichochemical and Microbiology of Rebon Shrimp Paste using Different Brown Sugar Concentration. *Jurnal Pengolahan Hasil Perikanan Indonesia*, *22*(2), 287–298. https://doi.org/10.17844/jphpi.v22i2.27716

Surya, R., Nugroho, D., Kamal, N., & Tedjakusuma, F. (2023). Effects of fermentation time on chemical, microbiological, antioxidant, and organoleptic properties of Indonesian traditional shrimp paste, terasi. *International Journal of Gastronomy and Food Science*, *31*(December 2022). https://doi.org/10.1016/j.ijgfs.2022.100643

Surya, R., & Tedjakusuma, F. (2022). Diversity of sambals, traditional Indonesian chili pastes. *Journal of Ethnic Foods*, *9*(1). https://doi.org/10.1186/s42779-022-00142-7

Tahtacı, S., & Başyiğit Kılıç, G. (2015). Halophilic Lactic Acid Bacteria and Their Application in the Food Industry. *Gida / the Journal of Food*, (January 2015). https://doi.org/10.15237/gida.gd15018

Tang, Z., Zhao, Z., Wu, X., Lin, W., Qin, Y., Chen, H., … Xiao, Y. (2023). A Review on Fruit and Vegetable Fermented Beverage-Benefits of Microbes and Beneficial Effects. *Food Reviews International*, *39*(8), 4835–4872. https://doi.org/10.1080/87559129.2021.2024222

Tanger, C., Müller, M., Andlinger, D., & Kulozik, U. (2022). Influence of pH and ionic strength on the thermal gelation behaviour of pea protein. *Food*

Hydrocolloids, *123*(January 2021). https://doi.org/10.1016/j.foodhyd.2021.106903

Tao, Z., Li, F., Wei, Z., Wu, K., Xie, S., Li, J., … Duan, X. (2025). Effect of salt concentration on free amino acid content and biogenic amines in the dried salted mackerel fishes during the processing and drying process. *Journal of Food Composition and Analysis*, *140*(February 2024), 107250. https://doi.org/10.1016/j.jfca.2025.107250

Vidal, V. A. S., Lorenzo, J. M., Munekata, P. E. S., & Pollonio, M. A. R. (2021). Challenges to reduce or replace NaCl by chloride salts in meat products made from whole pieces–a review. *Critical Reviews in Food Science and Nutrition*, *61*(13), 2194–2206. https://doi.org/10.1080/10408398.2020.1774495

Vinci, G., Prencipe, S. A., Masiello, L., & Zaki, M. G. (2022). The Application of Life Cycle Assessment to Evaluate the Environmental Impacts of Edible Insects as a Protein Source. *Earth (Switzerland)*, *3*(3), 925–938. https://doi.org/10.3390/earth3030054

Wagner, K. H., Derkits, S., Herr, M., Schuh, W., & Elmadfa, I. (2002). Antioxidative potential of melanoidins isolated from a roasted glucose-glycine model. *Food Chemistry*, *78*(3), 375–382. https://doi.org/10.1016/S0308-8146(02)00200-5

Wakinaka, T., Iwata, S., Takeishi, Y., Watanabe, J., Mogi, Y., Tsukioka, Y., & Shibata, Y. (2019). Isolation of halophilic lactic acid bacteria possessing aspartate decarboxylase and application to fish sauce fermentation starter. *International Journal of Food Microbiology*, *292*(November 2018), 137–143. https://doi.org/10.1016/j.ijfoodmicro.2018.12.013

Wang, D., Zhai, S. W., Zhang, C. X., Zhang, Q., & Chen, H. (2007). Nutrition value of the Chinese grasshopper Acrida cinerea (Thunberg) for broilers. *Animal Feed Science and Technology*, *135*(1–2), 66–74. https://doi.org/10.1016/j.anifeedsci.2006.05.013

Wang, Z., Wang, Z., Ji, L., Zhang, J., Zhao, Z., Zhang, R., … Chen, L. (2021). A Review: Microbial Diversity and Function of Fermented Meat Products in China. *Frontiers in Microbiology*, *12*(June), 1–8. https://doi.org/10.3389/fmicb.2021.645435

Watkins, P. J., Kearney, G., Rose, G., Allen, D., Ball, A. J., Pethick, D. W., & Warner, R. D. (2014). Effect of branched-chain fatty acids, 3-methylindole and 4-methylphenol on consumer sensory scores of grilled lamb meat. *Meat Science*, *96*(2), 1088–1094. https://doi.org/10.1016/j.meatsci.2012.08.011

Wei, G., Wang, K., Liu, Y., Regenstein, J. M., Liu, X., & Zhou, P. (2019). Characteristic of low-salt solid-state fermentation of Yunnan oil furu with Mucor racemosus: microbiological, biochemical, structural, textural and sensory properties. *International Journal of Food Science and Technology*, *54*(4), 1342–1354. https://doi.org/10.1111/ijfs.14022

Wisnu Murti, R., Sumardianto, S., & Purnamayati, L. (2021). Pengaruh Perbedaan Konsentrasi Garam terhadap Asam Glutamat Terasi Udang Rebon (Acetes sp.). *Jurnal Pengolahan Hasil Perikanan Indonesia*, *24*(1), 50–59. https://doi.org/10.17844/jphpi.v24i1.33201

Xiong, T., Li, J., Liang, F., Wang, Y., Guan, Q., & Xie, M. (2016). Effects of salt concentration on Chinese sauerkraut fermentation. *Lwt*, *69*, 169–174. https://doi.org/10.1016/j.lwt.2015.12.057

Yao, Y., Zhou, X., Hadiatullah, H., Zhang, J., & Zhao, G. (2021). Determination of microbial diversities and aroma characteristics of Beitang shrimp paste. *Food Chemistry*, *344*(November 2020). https://doi.org/10.1016/j.foodchem.2020.128695

Ye, Q., Tan, J., He, X., Wang, C., Liu, X., Li, C., … Zeng, Z. (2024). Effect of lipase and lipoxygenase on lipid metabolism and the formation of main volatile flavour compounds in fermented fish products: a review. *International Journal of Food Science and Technology*, *59*(3), 1248–1259. https://doi.org/10.1111/ijfs.16912

Yıltırak, S., Kocadağlı, T., Evrim Çelik, E., Özkaynak Kanmaz, E., & Gökmen, V. (2022). Effects of sprouting and fermentation on the formation of Maillard reaction products in different cereals heated as wholemeal. *Food Chemistry*, *389*(February). https://doi.org/10.1016/j.foodchem.2022.133075

Yu, J., Lu, K., Zi, J., Yang, X., Zheng, Z., & Xie, W. (2022). Halophilic bacteria as starter cultures: A new strategy to accelerate fermentation and enhance flavor of shrimp paste. *Food Chemistry*, *393*(January). https://doi.org/10.1016/j.foodchem.2022.133393

Yu, M., Xie, Q., Sun, H., Wang, Y., Tang, Y., Wang, B., … Zheng, C. (2024). Characterization of odor properties of human milk: Effect of inter-individual nutrient differences on key odor-active compounds and odor attributes. *Food Chemistry*, *431*(April 2023). https://doi.org/10.1016/j.foodchem.2023.137091

Yu, X., Zhao, M., Hu, J., Zeng, S., & Bai, X. (2012). Influence of pH on the formation and radical scavenging activity of volatile compounds produced by heating glucose with histidine/tyrosine. *European Food Research and Technology*, *234*(2), 333–343. https://doi.org/10.1007/s00217-011-1644-0

Zhan, Y., Li, J., Li, T., Xie, K., Tu, C., Liu, Z., … Zhang, B. (2024). Investigation of the Alternations in Lipid Oxidation and Lipase Activity in Air-Dried Hairtail (Trichiurus lepturus) during Chilled Storage. *Foods*, *13*(2). https://doi.org/10.3390/foods13020229

Zhang, L., & Lecoq, M. (2019). Locust and Grasshopper Management, (January). https://doi.org/10.1146/annurev-ento-011118-112500

Zhang, X., Yang, J., Gao, H., Zhao, Y., Wang, J., & Wang, S. (2020). Substituting sodium by various metal ions affects the cathepsins activity and proteolysis in

dry-cured pork butts. *Meat Science*, *166*(March). https://doi.org/10.1016/j.meatsci.2020.108132

Zulkipli, A. S., & Salleh, R. M. (2021). Flavour Improvement of Protein Hydrolysates Derived from Cephalopods Byproducts Using Maillard Reaction: A Short Review. *ASM Science Journal*, *15*, 1–13. https://doi.org/10.32802/ASMSCJ.2021.694